**Complete assignment in notebook. Failure to do so will result in a LaSalle**

1. Graph the function by creating a table of values.
2. Graph the function by creating a table of values.
3. How is the graph of different than the graph of ? Describe at least 3 things you notice about the graphs.

DIRECTIONS:

If the problem says Graph:  
A) create a table and graph the following functions.

B) Identify the vertex as an ordered par, (x, y)

C) Identify the axis of symmetry by writing the equation for the line (example, x = 2)

If the problem says Sketch a prediction:  
A) sketch a prediction of the shape of the graph for the given quadratic function on an x-y coordinate plane   
B) Write at least one sentence to explain why you predicted the shape did.

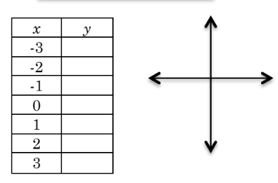
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| --- | --- |
| 1. Graph: | 1. Graph: |
| 1. Sketch a prediction: | 1. Sketch a prediction: |
| 1. Graph: | 1. Graph: |
| 1. Sketch a prediction: | 1. Sketch a prediction: |
| 1. Graph: | 1. Graph: |
| 1. Sketch a prediction: | 1. Sketch a prediction: |
| 1. Graph: | 1. Graph: |
| 1. Predict: | 1. Predict: |
| 1. Graph: | 1. Graph: |
| 1. Predict: | 1. Predict: |
| 1. Graph: | 1. Graph: |
| 1. Predict: | 1. Predict: |

|  |  |
| --- | --- |
| Main Ideas | Notes |
| Standard Form | A quadratic function is writing in VERTEX FORM as |
| Graph | When graphed, a quadratic equation creates a u-shaped curve called a  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |
| Types of Parabolas (PARENT FUNCTION) | Graph the quadratic functions:    Step 1: Make a table of values  Step 2: Graph the points  Step 3: Connect the points with a smooth curve |
| Axis of Symmetry | Every parabola is symmetric with respect to one line called the axis of symmetry. Here is how we can calculate the axis of symmetry algebraically: |
| Minimum or Maximum | The axis of symmetry is a line through the minimum or maximum point of the parabola. We call this point the \_\_\_\_\_\_\_\_\_\_\_\_\_\_.  To find the vertex algebraically:  First:  Then: |

Example 1:

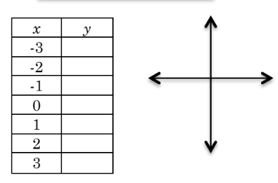
1. Graph each equation 2.) Label the axis of symmetry and vertex

Graph



Example 2:

+1



Example 3:

+1

